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IN THE CLAIMS

Amendments to the Claims

A Listing of Claims is provided as follows and will replace any previous listing.
No new matter has been added.

Listing of Claims:

1-9. (Canceled)

10. (Previously Presented) A device for closing a left atrial appendage of a heart, said device comprising:

a shaft having a proximal end and a distal end, wherein the distal end is percutaneously adapted to enter a pericardial space, advance over an epicardial surface, and approach the exterior of the left atrial appendage;

at least one closing element carried by the shaft adapted to close the left atrial appendage when the distal end of the shaft is positioned adjacent the left atrial appendage; and

the device further comprises an expander for separating the pericardium in the region of the left atrial appendage;

wherein the shaft is curved over its length and has a crescent-shaped cross-section.

11-15. (Canceled)

16. (Previously Presented) A device for closing a left atrial appendage of a heart, said device comprising:

a shaft having a proximal end and a distal end, wherein the distal end is percutaneously adapted to enter a pericardial space, advance over an epicardial surface, and approach the exterior of the left atrial appendage;

at least one closing element carried by the shaft adapted to close the left atrial appendage when the distal end of the shaft is positioned adjacent the left atrial appendage;

wherein the distal end is configured to lie within an atrioventricular valve groove of the heart;

wherein the shaft has at least one lumen which extends from the proximal end to an exit port spaced inwardly from the distal end by a distance in the range from 0.5 cm to 5 cm;

wherein the closing element extends through the at least one lumen;

wherein the closing element comprises a grasping tool which extends through one of the lumens, said grasping tool being adapted to temporarily grasp the left atrial appendage; and

wherein the grasping tool comprises a first closing element, and the device further comprises a second closing element which is adapted to permanently close the left atrial appendage while the left atrial appendage is being temporarily closed with the grasping tool.

17-19. (Canceled)

20. (Previously Presented) A device for closing a left atrial appendage of a heart, said device comprising:

a shaft having a proximal end and a distal end, wherein the distal end is percutaneously adapted to enter a pericardial space, advance over an epicardial surface, and approach the exterior of the left atrial appendage;

at least one closing element carried by the shaft configured to engage the left atrial appendage in a manner to close the left atrial appendage;

wherein the shaft is curved over its length from the distal end to the proximal end;

wherein the shaft has a longitudinal axis extending from the proximal end to the distal end, a width dimension measured perpendicular to the longitudinal axis, and a thickness dimension measured perpendicular to the longitudinal axis and perpendicular to the width dimension, and wherein over at least the majority of the length of the shaft the width dimension is greater than the thickness dimension; and

wherein the shaft has at least two lumens, each lumen extends from the proximal end to an exit port spaced from the distal end, wherein the shaft includes a generally

thinned region adjacent the distal end, the thinned region defining a surface that forms a portion of an exterior surface of the shaft, and the exit ports for the lumens are defined in the surface.

21-36. (Canceled)

37. (Previously Presented) A device for closing a left atrial appendage of a heart, said device comprising:

a shaft having a proximal end and a distal end, wherein the distal end is percutaneously adapted to enter a pericardial space, advance over an epicardial surface, and approach the exterior of the left atrial appendage;

at least one closing element carried by the shaft adapted to close the left atrial appendage when the distal end of the shaft is positioned adjacent the left atrial appendage; and

the device further comprises an expander for separating the pericardium in the region of the left atrial appendage;

wherein the closing element includes a clip to permanently close the left atrial appendage and wherein the expander and the closing element are introducable through lumens in the shaft.

38. (Canceled)

39. (Previously Presented) A device for closing a left atrial appendage of a heart, said device comprising:

a shaft having a proximal end and a distal end, wherein the distal end is percutaneously adapted to enter a pericardial space, advance over an epicardial surface, and approach the exterior of the left atrial appendage;

at least one closing element carried by the shaft adapted to close the left atrial appendage when the distal end of the shaft is positioned adjacent the left atrial appendage;

wherein the distal end is configured to lie within an atrioventricular valve groove of the heart;

wherein the shaft has at least one lumen which extends from the proximal end to an exit port spaced inwardly from the distal end by a distance in the range from 0.5 cm to 5 cm; and

wherein the shaft has a longitudinal axis extending from the proximal end to the distal end, a width dimension measured perpendicular to the longitudinal axis, and a thickness dimension measured perpendicular to the longitudinal axis and perpendicular to the width dimension, and wherein over at least the majority of the length of the shaft the width dimension is greater than the thickness dimension.

40. (New) A device for closing a left atrial appendage of a heart, said device comprising:

a shaft having an elongated longitudinal body including a proximal end and a distal end, wherein the distal end is configured to percutaneously enter a pericardial space, advance over an epicardial surface, and approach the exterior of the left atrial appendage;

a plurality of lumens extending through the shaft along the longitudinal body and between the proximal end and the distal end;

an expander configured to be extended through one of the lumens, the expander is configured to expand the pericardial space by separating a parietal pericardium from the epicardial surface;

a grasping tool configured to be extended through one of the lumens, the grasping tool is configured to temporarily grasp the left atrial appendage; and

a closure tool configured to be extended through one of the lumens, the closure tool is configured to close the left atrial appendage.

41. (New) The device according to claim 40, wherein the shaft is configured to percutaneously access the left atrial appendage by approaching beneath a patient's rib cage, between a xiphoid and adjacent costal cartilage.

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42. (New) The device according to claim 40, wherein the curvature of the shaft is adjustable.

43. (New) The device according to claim 40, wherein the distal end is configured to lie within an atrioventricular valve groove of the heart, and the distal end of the shaft is configured to be positioned adjacent the left atrial appendage.

44. (New) The device according to claim 40, wherein the elongated longitudinal body being of sufficient length for insertion of at least the distal end portion through a transcutaneous access to the pericardial space.

45. (New) The device according to claim 40, wherein the lumens are constructed as separate discreet channels extending through the shaft.

46. (New) The device according to claim 40, wherein the expander comprises an inflatable balloon, inflatable balloon is configured to create a working space between the parietal pericardium and epicardial surface.

47. (New) The device according to claim 40, wherein the closing element comprises a loop to close the left atrial appendage.

48. (New) The device according to claim 40, wherein the closing element is configured to simultaneously engage opposite side surfaces of the left atrial appendage.

49. (New) The device according to claim 40, wherein the closure tool is configured to permanently close the left atrial appendage

50. (New) The device according to claim 40, wherein the closure tool is configured to close the left atrial appendage, such that the distal end of the shaft is positioned adjacent the left atrial appendage, while the left atrial appendage is being temporarily grasped with the grasping tool.

51. (New) The device according to claim 40, further comprising a handle attached to the proximal end of the shaft, the handle including at least one guide configured to manipulate the grasping tool and closure tool.

52. (New) The device according to claim 40, wherein one of the lumens is for irrigating the pericardial space.

53. (New) The device according to claim 40, further comprising a viewing scope positionable through one of the lumens in the shaft.

54. (New) The device according to claim 40, further comprising an access sheath configured to be introduced into the pericardial space.

55. (New) A device for closing a left atrial appendage of a heart, said device comprising:

- a shaft having an elongated longitudinal body including a proximal end and a distal end, wherein the distal end is configured to percutaneously enter a pericardial space, advance over an epicardial surface, and approach the exterior of the left atrial appendage;

- a plurality of lumens extending through the shaft along the longitudinal body and between the proximal end and the distal end;

- a balloon expander configured to be extended through one of the lumens, the balloon expander configured to expand the pericardial space by separating a parietal pericardium from the epicardial surface, the balloon expander is an inflatable balloon comprising a major portion that is configured to expand toward the parietal pericardium and a minor portion that is configured to expand away from the parietal pericardium, such that the balloon expander is an asymmetrical balloon;

- a grasping tool configured to be extended through one of the lumens, the grasping tool is configured to temporarily grasp the left atrial appendage; and

a closure tool configured to be extended through one of the lumens, the closure tool is configured to close the left atrial appendage.

56. (New) The device of claim 55, wherein the major portion is extendable above a central longitudinal axis defined in the elongated longitudinal body and extendable toward the parietal pericardium, when the balloon is inflated.